



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,665	06/14/2005	Sheng-Gen Pan	119065-032	4699
29177	7590	08/03/2009		
K&L Gates LLP P.O. BOX 1135 CHICAGO, IL 60690			EXAMINER DUONG, DIEU HIEN	
			ART UNIT 2821	PAPER NUMBER
			MAIL DATE 08/03/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/539,665

**Applicant(s)**

PAN, SHENG-GEN

**Examiner**

DIEU HIEN T. DUONG

**Art Unit**

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This office action is a response to applicant's amendment filed 03/26/2009. In virtue of this amendment, claims 1-5 are canceled; thus, claims 6-10 are currently in the instant application.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane et al. (Us 6,639,555 B1), hereinafter "Kane".

Regarding claim 6, Kane discloses, in Figures 1 and 16, an antenna structure having a substantially flat form with a ground connection, which is designed for use for at least two frequency bands, comprising

two transmitter/receiver antenna branches (152, 153), which are electrically conductively connected to a foot area, wherein the foot area surrounds the ground connection;

two RF supply connections (154, 155) that are arranged at a distance from one another, provided in the foot area, between which the ground connection is provided,

wherein the two transmitter/receiver antenna branches (152, 153) of the antenna structure are designed such that the two transmitter/receiver antenna branches are associated overlapping frequency bands; and

an excitation circuit with an RF supply line, which branches to the two RF supply connections.

Fig. 1

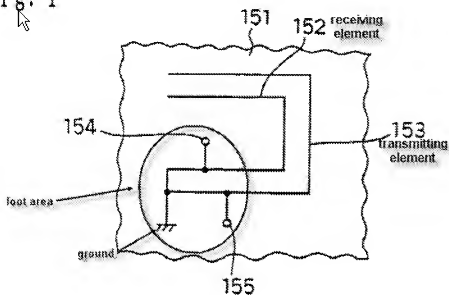
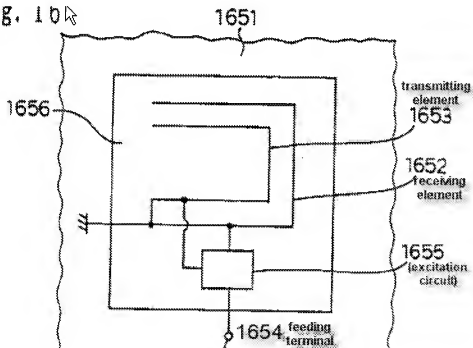


Fig. 1b



Kane does not disclose wherein the frequency bands are overlapping. However, such difference is not patentable merits since it would have been obvious to one having ordinary skill in the art at the time the invention was made to set the lengths of the antenna branches to achieve desired frequency bands based on particular application or environment of use. Therefore, to employ having the frequency bands as claimed invention would have deemed obvious to person skill in the art of antenna.

Regarding claim 7, as applied to claim 6, Kane discloses, wherein the antenna structure is a planar, inverted F structure.

Regarding claim 8, as applied to claim 6, Kane discloses, in Figure 6, wherein the two transmitter/receiver antenna branches (152, 153) of the antenna structure are each designed in a meandering shape.

Regarding claim 9, as applied to claim 6, Kane discloses, in Figure 6, wherein the two transmitter/receiver antenna branches (152, 153) are in the form of a double meander.

Regarding claim 10, Kane discloses every feature of claimed invention as expressly recited in claim 6, except for the distance between the two meandering transmitter/receiver antenna branches is in the range between 0.5 and 10 mm.

However, such difference is not patentable merits since it would have been obvious to one having ordinary skill in the art at the time the invention was made to determine the distance between the antenna branches and it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

***Response to Arguments***

4. Applicant's arguments with respect to claims 6-10 have been considered but are moot in view of the new ground(s) of rejection. This Action is made Non-Final.

***Inquiry***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEU HIEN T. DUONG whose telephone number is (571)272-8980. The examiner can normally be reached on Monday - Friday, from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/539,665  
Art Unit: 2821

Page 6

07/30/09  
DD  
AU 2821

/Trinh Vo Dinh/  
Primary Examiner, Art Unit 2821